

**ADVISORY GROUP ON ECONOMIC RECOVERY  
GREEN INFRASTRUCTURE RECOVERY**

May 2020

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## FOREWORD

The pandemic has been a global health and economic crisis, but less an infrastructure crisis. That is different from previous events such as wars and natural disasters which see massive infrastructure disruption. Resilient Infrastructure must, however, be front and centre to our response to the longer-term emergency of climate change and has a significant impact on people's wellbeing as the fabric of the places in which they work, rest and play.

Our top-line recommendation is therefore that infrastructure must not be forgotten in response to the crisis, and that the lessons from this period can provide a springboard towards longer-term outcomes of net-zero carbon and inclusion in places which are resilient and contribute to our wellbeing. A speedy economic recovery is critical and infrastructure stimulus has a part to play however, infrastructure is a long-term game and we must only do what is right for the long-term of our economy and places, as we seek to do what we can in the short-term..

The Infrastructure Commission for Scotland (ICS) has made recommendations on Scotland's infrastructure needs to support these long-term outcomes. This paper suggests that the crisis has served to amplify many of its findings and increased the need to ensure that these recommendations are followed without hesitation or deviation. The wider context is discussed in Section 3, and some particular lessons we can take, and infrastructure interventions we can pursue in support of that direction as we recover are set out in Section 4 of this paper. Particular learnings include:

### Things to build on:

- **Transport** infrastructure usage has been massively reduced accompanied by a modal shift to active travel with more people walking and cycling on traffic-light roads. However, as movement restrictions are beginning to ease, there are already noticeable signs of a bounce back with the car being favoured over public transport. The need for a future with reduced overall travel consumption and a shift away from car use had been identified before the crisis, the opportunity now is to accelerate this by building on the changed travel behaviours it has necessitated. Research capability should be deployed quickly to understand and sustain some of these patterns and to also establish how mass transit systems can be configured and managed to operate effectively in the future. We should consider more segregated space for walking and cycling and how we can build on the range, accessibility and affordability of these modes through increased access to electric bikes and potentially scooters.
- **Digital** infrastructure is central to new ways of living and working. There has been a significant increase in use but overall capacity has been sufficient. There are some national scale resilience issues such as lack of international connectivity and it is even clearer that near universal fibre provides the most resilient and high-speed & capacity. The required changes to commercial and regulatory models for enhanced roll-out should be accelerated. The rapid digitalisation of some public services has shown what can be done and should be sustained. Knowledge capture approaches and resources from the research sectors could be used to learn from these temporary fixes before the new behaviours and ways of working are lost in a spring-back. Investment in infrastructure to make these digital channels more permanent, secure, resilient and enhance them further will be required.
- **Social infrastructure** flexibility has been highlighted with facilities re-purposed and some sharing of assets across organisations and sectors. This can be built on with place-based multi-agency asset strategies, a presumption in favour of co-location for any services requiring new homes and multi-agency use for any new asset. Emerging models of de-decentralised neighbourhood and community hubs can be built on.

### Broader Infrastructure Considerations

There are infrastructure classes which have not really been a part of the crisis, but where recovery interventions could pay significant dividends. Building heating along with transport is our biggest decarbonisation challenge. One of the most effective immediate stimulus investments would be in energy efficiency works to existing buildings. It is low-regret and has a high potential for local labour content and multipliers. This could include direct and targeted support for home owners and all interventions should be to the highest possible net-zero ready standard. We must not shy away from increasing the energy efficiency requirements for new buildings even as demand is potentially disrupted. Mobile connectivity, energy network resilience, carbon capture and storage and flood defences are all important infrastructures for the transitions we are seeking to make. The levers for increased investment are mixed between reserved and devolved powers with a strong regulatory dimension. As suggested by the Infrastructure Commission for Scotland there must be immediate and closer collaboration between the UK and Scottish Governments on these matters.

### Related Issues

Alongside these directly infrastructure-related points, there are wider issues which have been highlighted and which have related infrastructure dimensions. Others may have addressed these more directly and we offer the following thoughts:

- **The digital divide** between the connected and un-connected has been highlighted. The crisis has done something to bridge the divide through family and some community action. Harnessing and sustaining this alongside investment in subsidised equipment, connectivity, training and support to unconnected groups will be needed.
- **Care for the elderly and homeless** bring social infrastructure needs. There is a long history of mixed public, private and third sector provision, and the building assets which underpin the services require long-term and stable funding sources for which new approaches may be required.
- **High-quality homes** have never been so closely linked to wellbeing in the public mind. There are many variables around the recovery of the for-sale housing market but the need for more affordable homes will remain. There is some risk in establishing and financing affordable rental approaches when a price adjustment is possible but interventions at scale are likely to be required.
- **Natural Assets** of local green have been appreciated, but the full value chain of the natural economy is really yet to be publicly debated. How our land use serves human activity and amenity; ecological diversity; carbon sequestration; raw materials, food and energy production is a national priority. Increased investment in Scotland's rich green and blue natural capital could deliver significant economic, environmental and wellbeing returns.

### The Place Dimension

These infrastructure systems and assets on their own do not mean that much to people. What is rightly more important to people is that the places in which they spend time and move between work for them; and what works for people in a place has changed. SFT, and the ICS believe that a strong place-dimension is required in all our future infrastructure planning to overlay the sector-based approaches which have been the norm. This paper sets out some of the approaches which can be adopted. There is a particular urgency as the pandemic has affected deprived places more acutely.

The response must seek to better understand and reflect the varied needs of different places. At a national level, combining and mining geographic data sets with demographic understanding of the pandemic impact could help this place-based response where the needs of cities will, for example be

different from seaside towns. At a micro level we must re-consider the ways we can use public and private inside and outside space. Rapid research and dissemination of workplace models and purposeful uses for outdoor public spaces could help. Finally, and perhaps most importantly is the re-emergence of communities. Personal experiences of walking, waving and clapping seems to have helped people re-engage. Our place experts can help us to help communities make sense of what they value and co-design infrastructure and services which work for them. We must use this knowledge for more active public-sector led place-making in areas of significant development as we have worked with the City of Edinburgh Council to do for Granton. We may also be wise to take the opportunity to reconsider any plans which rely on travel to amenities and lack the services and diversity needed to make resilient communities.

### Resources & Industry

Infrastructure is expensive. To reduce overall consumption we must make better use of the assets we have, which as the ICS has pointed out will require an increased understanding of whole-life cost and value and a tilt of investment towards maintenance and away from new asset creation. Infrastructure technology can help, and we should expand capacity for network and asset digital modelling, sensors, data collection and the creation and use of digital twins to optimise smart infrastructure performance.

To deliver a just transition to a net-zero future will require consideration of funding through consumer charges, asset values, and / or tax payers across the major classes of decarbonisation investment. Without a holistic assessment including taxation and regulation at UK, Scottish and local levels or there may be concentration of burden on those less able to pay. Others have written more on this subject and there will be a considerable need for courage and cooperation to maintain pace.

Alongside capital funding, making the right decisions and implementing them well requires appropriately skilled and experienced resource and capacity to analyse, prioritise, coordinate and deliver infrastructure (Section 5). The ICS has already highlighted this need and is considering further in its Phase 2 work. This requirement exists at national, regional and local levels, across sectors and organisations. Many organisations have sporadic need and specialists such as SFT and the procurement centres of expertise provide opportunities for resource sharing which can be further explored.

Economic and social infrastructure delivery and maintenance is a significant proportion of the construction industry. The public sector is a dominant client of the industry and has a responsibility to work with it to improve its sustainable economic, fair-work, quality and environmental outcomes. The industry must also change to deliver the agenda which has been set out and there are productivity and environmental gains to be made from digitalisation and moving elements from construction to production approaches. These changes require investment, and organised pipelines of business from disciplined customers. There are some risks for Scotland in the potential for off-site construction to be come off-shored construction. Sustained collaborative effort between government, wider public sector buyers and the many elements of the industry will be required to deliver improved outcomes.

This rapidly developed paper sets out in much more detail the context, interventions and ways of working which the infrastructure experts across the Scottish Futures Trust believe will aid recovery and improve the infrastructure outcomes for Scotland set out in our Corporate Plan which are linked to the national performance framework. I am pleased to present it to the Advisory Group and myself and members of the team would be happy to discuss it with you if that would be of value.

Peter Reekie, Chief Executive, Scottish Futures Trust, May 2020

## ADVISORY GROUP ON ECONOMIC RECOVERY GREEN INFRASTRUCTURE RECOVERY

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## 1. Executive Summary

### 1.1. Introduction

The Advisory Group on Economic Recovery ('AGER') has been asked by Scottish Government to provide independent expert advice on supporting Scotland's sectors and regions to recover from the impact of COVID-19, building a greener, fairer and more inclusive society in Scotland. This includes setting out possible paths towards a better recovery and a more robust, more resilient Scottish economy. To inform its deliberations, AGER has asked Scottish Futures Trust ('SFT')<sup>1</sup> to set out its thinking on the following question:

*"What contribution can infrastructure investment make to recovery, and how might priorities and investment change?"*

COVID-19 has created a global health and now economic crisis but actually less of a physical infrastructure one. Scotland's infrastructure has remained largely operational and resilient, albeit there have been significant demand reductions in some sectors (e.g. transport). It has also seen substantial demands placed on key networks, such as the telecoms system, all of which have largely enabled Scotland to carry on in a way that would not have been possible even a few years ago.

Infrastructure has an important and multi-faceted role to play in the recovery. It is key to creating the kinds of places we want, driving an inclusive economy and delivering a net zero emissions future. It is also about how our infrastructure makes the country more resilient moving forward and how it supports prosperity through construction and maintenance, creating and sustaining employment.

The virus represents an infrastructure opportunity. It also creates an opportunity to test and accelerate the thinking around net zero carbon and inclusive growth that was already in place before COVID 19 struck and augment this with the lessons already learned – for example, we now know that resilience and wellbeing will be important going forward. In addition, the public and private sectors are called upon, where possible, to speed up delivery. There are however, areas where we need to understand the impact of the virus more: what long terms trends are emerging; which behaviours are likely to return to a previous 'norm', and indeed, how do we make sense of all that has happened? If through all of this, there are elements we do not want to see going forward, then we need to focus on how we stop this or how we incentivise alternative outcomes. Whilst not exhaustive, the following lists some areas of Scottish infrastructure and services that have been impacted by the virus:

- Transport infrastructure usage has been massively reduced – there will be some significant bounce-back but a future with different working and leisure patterns and reduced overall travel demand is central to reducing the significant proportion of our emissions which come from transport. The response of public transport to the crisis also needs to be considered in terms of not only ensuring the safety of passengers, but also continuing to offer efficient use of time benefits which the crisis has delivered as a by-product. For instance, improved digital connectivity on will public transport further both productivity and effective use of time. This will have a positive effect on wellbeing, for example.
- There has been a modal shift to active travel, with many more people walking and cycling for short distances. This will have an impact upon our public realm design (e.g. roads, cycling lanes, pedestrian areas) and how we deliver 'flow' through our cities, towns and villages;

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<sup>1</sup> SFT was established in 2008 to improve the efficiency and effectiveness of infrastructure investment and use in Scotland by working collaboratively with public bodies and industry, leading to better value for money and ultimately improved public services.

- Digital infrastructure has seen a significant increase in use but overall capacity has been sufficient. There are some national scale resilience issues to be addressed such as a lack of international connectivity (other than via London) and an understanding that as near universal as possible full fibre reach provides the most resilient and high-speed and capacity. The commercial and regulatory models for its roll-out should be accelerated. Likewise, the opportunity for innovation and creativity from such networks needs to be exploited – essentially drawing upon expertise to make Scotland a 5G country and leader.
- The rapid digitalisation of some services in the private and public services has shown what can be done and should be sustained, but the digital divide between the connected and unconnected has also been highlighted in areas such as delivering education. The jolt has done something to bridge the divide but sustained investment in IT kit, training and support to unconnected groups will be needed.
- The flexibility of social infrastructure has been highlighted with facilities re-purposed and some sharing of assets across organisations and sectors. This can be built on with increased consideration of public assets across communities and a presumption in favour of multi-agency use for any new asset.
- A light has been shone on the need for and the ability of our social infrastructure to deliver future flexibility and making it more resilient as a consequence. This includes supporting some of our society's most vulnerable people e.g. the homeless and those encountering poverty and additional support needs. Virus transmission has shown the interdependencies among all groups of society and how we respond, and indeed, a need to continue that thinking around alternative solutions for addressing persistent problems and challenges.
- Cities and towns face significant challenges from a contraction in activity e.g. the use of retail and commercial space. This means alternative uses will have to be found for such space like housing and creating footfall for those remaining services. We need to ensure spaces are adaptable and can respond to the circumstances arising from the virus and other events. Indeed the public sector should seize opportunities to acquire such spaces and use them to deliver more local services and work spaces, again negating a need to travel, thereby reducing emissions and changing to a more flexible workforce and related arrangements. In some rural areas, the virus has highlighted the dependency upon key sectors which have been significantly impacted e.g. tourism. As it is the case for towns and cities, we need to understand how we build diversification of fragile, sector dependent economies and offer the infrastructure and capability to support this. This includes access to such facilities such as multi-service, multi-use rural hubs and building upon high value clusters such as renewable energy and the blue economy.
- There is still a shortage of the right housing in the right place to meet people's changing needs over their lives. We need to understand more fully what is required and then how this translates to planning, coordination and infrastructure provision.
- Scotland's natural assets are key to both its wellbeing and its economy. Likewise, addressing areas such as vacant and derelict land is important to many of Scotland's communities, particularly in areas of deprivation which bear the scars of an industrial past. Addressing such challenges also allows us to integrate low carbon thinking, how we deliver enabling infrastructure at the start of any response and deliver local services and opportunities for individuals.

As highlighted earlier, for some areas and types of infrastructure, we already understand the challenges of transition to a wellbeing economy, as well as how these will contribute to a net zero emissions Scotland. This means that we need to support upgrading and strengthening of capacity and design, new technologies and approaches. These underpin such elements as digital and mobile

connectivity, heat and energy networks and carbon capture usage and storage – all of which will contribute to our economy and wellbeing as well as innovation.

As the Infrastructure Commission for Scotland rightly captures, prioritisation will be key to utilising the ever pressured resources available to both the public and private sectors to drive a green recovery and a wellbeing economy. It is imperative that these resources are targeted to build an economic stimulus through “high-multiplier” government spending.

## 1.2. The Wider Context

It is important to recognise that the recovery needs to be built upon Place, Inclusive Growth and Climate. Resilience is also key. These themes need to combine with a series of other factors.

We need to consider the lessons of the last few months and assess the ability of the current infrastructure to meet the expectations of the public going forward. In doing so, we should recognise that the crisis has demonstrated that decisions can be made quickly and that resources can be found and mobilised. Lessons should also be drawn from how communities responded; and how that response will affect decision making in the future and how it will inform macro and micro decisions around building resilience.

Place shows a way of thinking about the challenges we face across Scotland and, indeed, how we might respond to them. Scotland’s geography has differences both in terms of terrain but also in terms of need and the challenges faced by its communities. These elements have to be taken into account. For instance, the response to COVID-19 in city and town centres, where there is large scale commercial and leisure space, will likely be very different to that of a rural area, where agri-and aquaculture and tourism industries, for example, form a much larger part of the economy. Both will need to deal with the impact of a retail downturn and how people’s shopping habits have changed but different approaches will be required. The virus has also resulted in a ‘local’ and online focus through the population spending time at home. It has also demonstrated the importance of micro-environments to support wellbeing. All these elements will impact upon the design and delivery of services and open spaces. As we outline later through the series of proposed interventions to address the longer term transition to a green, wellbeing economy, this will require different physical and infrastructure responses. Ultimately, a place based approach needs to be built into in all we do – Place is much more than just a location on a map; it is about how places can draw upon the drive of their communities and organisations to enable and deliver successful places, utilising the resources and assets available to enable positive change and wellbeing.

Several levers are available to the public sector to enable Scotland’s transition to a greener, net zero and resilient wellbeing economy. The public sector can ‘pull’ any one, or a combination of them, to deliver activity. For instance, many of these levers may be needed to assist the housing sector and the different types of housing stock and tenures we need to support our economy. These levers will also be required for the adaption of existing stock to reduce emissions. They also include how we use public sector assets such as land and assets to drive activity. This may see the enabling of larger scale development near towns and cities (with local services and spaces to enable local living) through to focussed housing delivery in rural and remote locations to attract and retain people, particularly the younger age group. The decision of which lever(s) to use should be based upon doing it for the right reason and to limit the ‘cost’ attached to any action. The public sector should also allow the private and third sectors to progress activity without support if they are able to: essentially these sectors should ‘just get on with things’ if they can- the public sector should not displace their activity.

The work of the Infrastructure Commission for Scotland should be key to AGER's thinking as well. The Commission's recent recommendations are still very relevant, particularly when we are considering a long term horizon, and indeed these have been adopted in their entirety in this paper. Their work highlights the need for a transition to a system-wide approach to infrastructure prioritisation, planning, delivery, regulation and operation across Scottish Government and all infrastructure sectors, supported by a coherent place-based approach to planning and decision-making.

Understanding the current status and thinking of the infrastructure and construction industries is key to determining their likely future capability to respond and engage. Thought needs to be given to new methods of working such as offsite manufacture and developing local supply chains for componentisation. These initiatives alongside embracing new digital technologies and use of data in the built environment will be catalysts for transformational economic change.

Finally, enshrining the core principles of prioritisation, funding and delivery of infrastructure is key: SFT and the Scottish Land Commission, through their thinking around an 'Infrastructure First' approach, sought to capture this. This includes understanding how different spatial policies and activities at a local, regional and national level need to be coordinated and providing a framework for decision making. We also need to understand how the key challenges of and barriers to the development and delivery of key asset classes (e.g. social infrastructure (health, education) transport, utilities, green and leisure spaces) impact upon the certainty and speed of delivery and find solution for those challenges and methods for overcoming those barriers.

### 1.3. Approaches to Identifying Interventions

SFT advocates an Infrastructure and Construction Green Recovery Plan (the 'Plan'). This response needs to focus on how the public sector buys infrastructure from the private sector as its biggest client group; what price it pays, what we intend to buy to deliver the national outcomes and provide a pipeline of work as well as the financial resources to fund that investment. Much will also depend upon the capacity of the public sector (which will undoubtedly differ across the country and in key organisations such local authorities) to go on making and delivering longer-term infrastructure investment plans and progress projects and sites whilst recovering from the crisis. SFT's, and others', role is very much about considering and supporting these elements to ensure the ongoing viability and success of infrastructure delivery.

The paper has captured a series of wide ranging interventions to deliver such a Plan, using a longer term look forward in line with AGER's remit. We call this 'Fresh Start'. This looks at the next five-year period of the Infrastructure Investment Plan. Likewise, it includes encapsulating a 'Future Ready' response to ensure the vision of an inclusive, resilient, net zero Scotland is maintained through this 'Fresh Start' period. SFT has also been involved in the 'here and now' response: the 'Re-start' and 'Kick-Start' phases of the recovery. We can provide more detail in this regard but felt that these were not the subject of the Group's remit.

We have also shaped our identified interventions around the themes of Place, Inclusive Growth and Climate for convenience. Clearly some will fit across some, or all, themes. These interventions should also not be considered exhaustive and will evolve as we learn more about the state of the economy as lockdown is eased and the impact of the new ways of working necessitated by the virus (e.g. social distancing) become better known.

### 1.4. Resources

There are two further key elements critical to the delivery of an Infrastructure and Construction Green Recovery Plan: The Funding and Finance 'toolbox' and People.

In relation to the funding and financing ‘toolbox’, we have set out a number of ‘tools’ that could be used to deliver infrastructure. When selecting the tools, it is important to understand what is needed. We also recognise that more innovation will be required going forward and this forms a significant part of our work.

People are also key to delivering success. They have to be motivated, empowered, and skilled. At present we see a system under stress from both austerity and the impact of the virus. To ensure that the vision of a greener, net zero and resilient wellbeing economy can be turned into reality, we need to ensure access to the right people. This will involve different ‘asks’ of different organisations across the country. It also relies on organisations being more flexible and prepared to work in different ways. There are different ways this can happen, but at the heart of it, resource needs to be used efficiently and effectively.

### 1.5. Conclusion

Infrastructure has a key role to play in both the immediate recovery and Scotland’s transition towards a greener, net zero and wellbeing economy. The recovery allows us to ‘build back’ a more resilient infrastructure which recognises that elements such as education, skills, innovation and technology are key to fully exploiting the opportunities and one which better reflects the future needs of Scotland: quality, fairness and inclusion and ensuring a strong indigenous construction and contractor base that will be more capable of coping with future challenges. It also allows us to enshrine the principles of Place, Inclusive Growth and Climate in all we do to drive prioritisation and decision making, ensuring that the right decisions are made for the right places at the right time - there is ‘no one size fits all solution’.

SFT very much sees itself at the heart of this infrastructure response. We will build upon the capability of the organisation to ensure change is effected and takes hold for the better. We can also clearly see where change needs to happen in the processes and systems that exist and the interventions that matter. We do, however, recognise that we never work in isolation: collaboration and partnership across the public, private and third sectors is key to success. Collectively we can make a difference to the future impact and performance of infrastructure in Scotland.

We would be happy to discuss our response with AGER if that was thought to be useful.

## 2. Introduction

This paper sets out the response of Scottish Futures Trust ('SFT') to the question posed by the Action Group on Economic Recovery ('AGER'):

*"What contribution can infrastructure investment make to recovery, and how might priorities and investment change?"*

COVID-19 has created a global and economic crisis but actually less of a physical infrastructure one. Scotland's infrastructure has remained largely operational and resilient, albeit there have been significant demand reductions in some sectors (e.g. transport). It has also seen substantial demands placed on key networks, such as the telecoms system, all of which have largely enabled Scotland to carry on in a way that would not have been possible even a few years ago.

Infrastructure has an important role to play in the recovery: this will be multifaceted as we will discuss in this paper. Ultimately, infrastructure is key to creating the kinds of places we want, driving an inclusive economy and delivering a net zero emissions future. It is also about how our infrastructure makes the country more resilient in future and how it supports prosperity through construction and maintenance, creating and sustaining employment.

The role of infrastructure, and its importance has recently been captured by the Infrastructure Commission for Scotland's ('ICS' or the 'Commission') recommendations<sup>2</sup>. The Commission's Phase 1 work, which predates the COVID-19 crisis, is still very much relevant given its long term outlook (with many elements re-iterated in this paper). This is particularly pertinent when we consider how prioritisation should be a key tenet of infrastructure planning and investment. However, a number of other factors will also inform the recovery response:

- Learning lessons and making sense of the short term response and long term behavioural changes that influence the shape of our infrastructure;
- Recognising the role of Place and how it shapes the recovery in different places;
- The available public sector levers and the costs associated with 'pulling' them;
- How market intelligence and resilience will be key to the future of the economy;
- The role of enabling infrastructure to drive change and outcomes; and
- The role of Infrastructure Technology.

The paper also considers the wider context for responding to the crisis and highlights key interventions that can support the recovery from the impact of COVID 19. It also highlights the importance of shaping and finding resources to deliver any response, focussing on the funding and finance "toolbox" and the capability and capacity of the 'system'. By weaving these elements together, we can collectively make Scotland stronger and deliver a resilient wellbeing economy that delivers for all.

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<sup>2</sup> [https://infrastructurecommission.scot/storage/247/FullReport\\_200120a.pdf](https://infrastructurecommission.scot/storage/247/FullReport_200120a.pdf)

### 3. The Wider Context

#### 3.1. Introduction

COVID-19 has caused a global crisis, however, our tangible infrastructure has remained largely operational and resilient. As central and local government are considering a relaxation of the current lockdown, those who work in the field of infrastructure are starting to consider how the virus has and will influence the provision of infrastructure in Scotland. This has seen the three key themes of Place<sup>3</sup>, Inclusive Growth<sup>4</sup> and Climate<sup>5</sup>, being joined by a fourth overarching theme - that of Resilience.



*Figure 1: The Key Themes of Recovery*

Infrastructure needs to provide resilience both now and in the future. What shape it will take differs. For instance, how can existing infrastructure support future resilience, or what form does resilience take in the provision of new infrastructure? All this needs to be considered as we move forward. Infrastructure also does not exist for its own sake: it serves key elements of all our lives such as education, health, transport, business, connectivity, leisure, wellbeing and housing.

There is no doubt that the virus will have a long term impact upon business models and societal behaviours alongside other existing issues such as the population shift to the East, an ageing demographic and Brexit. The precise details and impacts of many of these elements are, as yet, unclear but will need to be considered as part of the future roadmap.

In addition to the key themes of Place, Inclusive Growth, Climate and Resilience, we believe there are a series of other factors that should influence thinking about recovery:

<sup>3</sup> <https://www.gov.scot/publications/place-principle-introduction/>

<sup>4</sup> <https://www.gov.scot/policies/economic-growth/inclusive-growth/>

<sup>5</sup> <https://www.gov.scot/environment-and-climate-change/>

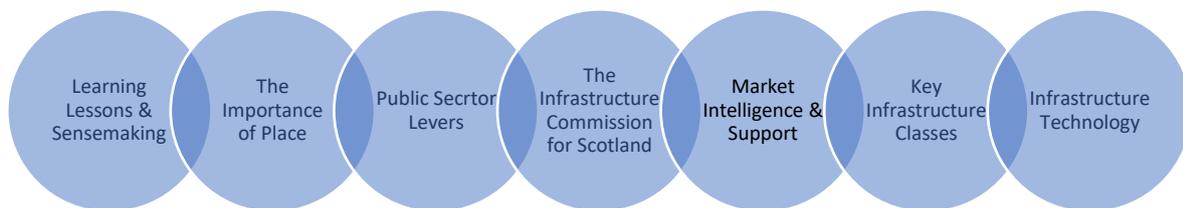


Figure 2: Key Factors Informing the Recovery

Each of these factors is discussed further, including related key activities which would aid the recovery and beyond. These factors will also allow governments (both local and central) and communities to set priorities in a way which reflect their needs and aspirations.

### 3.2. Learning Lessons and Sensemaking

Partners, including SFT, have been working together to consider the impact of COVID-19 on all we do and how we can learn from the response to date; and how making sense of what has happened can inform future activities. This learning will inform the systems and processes that will have to be put in place. It also captures how behavioural changes may well impact upon need and the response to it. For instance, will working at home become the norm, reducing the need for physical space and public transport, or does the physical space have a specific reason for being: e.g. be a place for collaboration and innovation? Three elements underpin this phase:

1. *Making Sense and Learning Lessons:* An assessment of the ability of the current infrastructure to meet the expectations of the public going forward, and how different organisations and communities have been empowered to respond and change.
2. *Changed Priorities:* As a challenge to existing and emerging public sector investment, do we need to re-visit and reconfigure previous decisions and approaches? Probably.
3. *Resetting Systems:* How do we reset / set common principles and systems which will guide decision making, involving criteria, conditions for success, relevant delivery processes, and so on? This very much feeds into AGER's and ICS' considerations.

Further work will look at developing plans for implementing the findings of the above and how they dovetail with emerging recovery plans.

### 3.3. The Importance of Place

Place has a key role to play in the recovery. Place is a way of looking at the fuller picture (see the Scottish Government ('SG') Place Principle<sup>6</sup>) to create successful places. These places will be key for the resilience of the nation, as well as enabling a green recovery and wellbeing economy. Place is as much a process as it is an outcome like the other themes. By enshrining Place, there is a greater chance of creating places where people will want live, return to and invest in their future creating a "virtuous cycle" and change.

Collaboration is key to Place and has the ability to shape and prioritise Scotland's infrastructure and other needs. It helps ensure coherence and consistency. It identifies challenges to be addressed,

<sup>6</sup> <https://www.gov.scot/publications/place-principle-introduction/>

opportunities to be exploited and key interdependencies. It leverages, re-purposes and prioritises assets and investment to drive future success.

Place based approaches need to be built into in all we do – it is much more than just a location on a map: it is about how those places can be successful, utilising the resources and assets available to enable positive change.

### 3.4. Public Sector Levers

There are a number of levers available to the public sector to transition to a zero carbon emissions future and to create a wellbeing economy. The importance of creating the right conditions for the private sector to deliver and contribute also needs to be recognised. The private sector, where it can, should be allowed to do what it does well. Pulling the full range of levers is key to future success: SFT’s Digital<sup>7</sup> workstream is a good example of this and has led to the delivery of a series of successes to underpin Scotland’s digital capability including the Scottish 4G Infill Project<sup>8</sup> and the Scotland 5G Centre<sup>9</sup>, amongst others.

The key levers that the public sector can use, can be summarised as:

Public Sector Lever	Key Aim
Coordination and Collaboration	Bringing together key parties to understand needs, opportunities for partnering both within the public sector and with others (private and third sectors).
Market Analysis and Workings	Understanding how the market works: e.g. industry vision, positioning and investment and using that to shape activity.
Policy	Using policy to deliver change e.g. planning.
Regulation	Regulation which encourages appropriate solutions and investment in Scotland.
Finance	The provision of finance and equity (e.g. Scottish National Infrastructure Bank) to target key sectors, activity and investment.
Value in Kind / Public Sector Assets	The public sector utilising its own assets to enable activity such as reuse, repurposing, recycling (e.g. asset transfer) and investment (e.g. joint ventures).
Funding	The provision of funding (e.g. grant) to support the development of interventions and outcomes.
Demonstrators and Pilots (Focussed Public Led Delivery and Ownership)	The wider public sector utilising its own resources and leading demonstrators and pilots with partners to achieve proof of concept or application.
Programmes and Projects (Tested Public Led Delivery and Ownership)	The wider public sector leading such elements to deliver change on a wider scale, utilising its own resources to do so.

The above demonstrates a ‘flow’ of cost for the public sector: essentially, working down the table, the ‘cost’ becomes greater for the public sector – therefore the earlier interventions can deliver significant change with less resource. The levers can also be used cumulatively.

<sup>7</sup> <https://www.scottishfuturestrust.org.uk/page/digital-infrastructure>

<sup>8</sup> <https://www.gov.scot/publications/scottish-4g-infill-programme-progress-update/>

<sup>9</sup> <https://scotland5gcentre.org/>

Linked to the levers, where the public sector also has a role in delivery, the public sector may wish to consider what it requires from such investment in return, and which goes beyond general policy and regulatory requirements. This “reciprocal” approach could incorporate enhanced fair work practices, wider community benefits clauses in public/private sector agreements as well as minimum digital and low carbon / standards. This, of course, needs to be balanced against how counterparties will respond and their capability to deliver e.g. a large company will be capable of delivering more community benefits than an SME. The public sector should also ensure that appropriate measurement and monitoring steps are included.

### 3.5. The Infrastructure Commission for Scotland

The Commission published its Phase 1 Report<sup>10</sup> in early 2020 and is currently active on Phase 2 of its remit. Its Phase 1 recommendations are still very relevant and should be factored into any recovery thinking. ICS’ recommendations are summarised in Appendix 1.

It is also becoming clear that the vision of an inclusive net zero carbon economy will require difficult choices to be made and trade-offs. Therefore, it is not a matter of choosing change or no change; it is a matter of what, how and when future change will happen and the choices we make and the processes we put in place to get there.

Infrastructure is a key enabler of and contributor to change. For long term infrastructure investment and prioritisation, the ability to demonstrate the contribution choices will make to achieving the desired outcomes will be essential. Building on the National Performance Framework, measures of success for infrastructure in a wellbeing economy will need to be established. This includes considering the basis of the tools which underpin our investment decisions - for example, is the Green Book still ‘fit for purpose’?

The work of the Commission highlights the need for a transition to a system-wide approach to infrastructure strategy, planning, delivery and operation across SG and all infrastructure sectors, supported by a coherent place-based approach to planning and decision-making.

### 3.6. Market Intelligence and Support

The private sector in all its forms is key to any future response – although the basis on which they participate may clearly change. At present, there are challenges across a number of infrastructure focussed sectors e.g. retail, commerce, tourism and leisure, whilst the construction sector is under significant pressure from a lack of current and perceived future activity. There are also challenges as regards the financial strength of large and small companies alike. The recovery therefore matters and impacts upon them, and by extension, upon Scotland’s competitiveness and attractiveness. Significant engagement has been undertaken with industry and the potential role which the public sector could have in supporting it, whether that be through activities such as issuing guidance for the safe return to work or by creating opportunities to respond to. This engagement has raised a number of questions:

- What will be the long term impact upon working practices and the need for physical space to support these?
- What long term trends will prevail in relation to public transport use? Will there still be a large scale trend to working from home for many?
- How will industries and investors recover, and will there be demand for their services and products, again impacting upon the kinds of infrastructure and space needed?

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<sup>10</sup> [https://infrastructurecommission.scot/storage/238/ExecutiveSummary\\_160120.pdf](https://infrastructurecommission.scot/storage/238/ExecutiveSummary_160120.pdf)

- What opportunities exist for manufacturing and related innovation, particularly in support of critical equipment and supply chain resilience?
- What role does public procurement of infrastructure have in the recovery and how does this support activity?
- How do we cost carbon impacts into the products we purchase and source and how does public sector procurement reflect this?
- Will there be key differentials as regards the response for urban and rural communities and places (e.g. need, capability and capacity)?
- How will future policy impact upon traditional business models (e.g. profit from traditional industries) and investor identity and rationale (e.g. social investment)?

Going forward, and as more of a focus for the construction sector, it is necessary to consider how public sector infrastructure programmes and projects will be delivered, and that they are delivered well. To do this needs the industry that delivers it to be in a healthy shape.

There have been several recent studies and papers recommending changes to how the approach to delivering infrastructure can be improved (e.g. the ICS recommendations and the Construction Procurement Review<sup>11</sup>, amongst others). All of these make sense and key actions should be implemented. The Scottish public sector, as the collective main commissioning client of the industry, should take leadership in these improvements which will make a difference to the efficiency of delivery of infrastructure and its effectiveness. It is essential for economic recovery that infrastructure is bought well and work is underway to develop new longer term procurement solutions that will help with this.

The management of the interface with industry is a critical component in this economic recovery. A healthy pipeline of work, the transparency of that pipeline, the geographical recognition of the dispersal of work, and how this relates to the indigenous supply chain are all vital elements. Managing a flow of work through medium or longer term programmes is helpful here.

Work is also underway to explore and develop the potential for new methods of working such as offsite manufacture and developing local supply chains for componentisation. These initiatives, alongside embracing new digital technologies and use of data in the built environment, will be catalysts for transformational economic change.

The construction industry in Scotland employs around 170,000 people (c.10% of Scotland's workforce)<sup>12</sup>, and its output represents around c.7% of GDP. It is important as a Scottish economic sector and it is necessary to maintain its vitality and sustainability to deliver the infrastructure required. Keeping the "infrastructure pound" in Scotland also has to be a key aim.

In addition, there are more general support mechanisms and activities which can assist both public and private sector infrastructure activity:

- Considering policies to accelerate activity e.g. enabling planning policy;
- The development of a Scottish industrial strategy to guide priorities and activity in manufacturing, production and innovation;
- The development of appropriate tools which can support organisations in the short to medium term e.g. foregoing of revenue charges and / or rates and guarantees for critical organisations, amongst others;

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<sup>11</sup> <https://www.scottishfuturestrust.org.uk/storage/uploads/sftoutputsummaryforcpr.pdf>

<sup>12</sup> <https://www.cs-ic.org/media/3353/construction-industry-strategy2-for-web-copy.pdf>

- Assisting in the repurposing, retro-fitting and re-use of existing assets no longer fit for purpose e.g. retail units and office space and their conversion to housing, for example;
- Support for a transitioning economy and ensuring access to re-skilling and new skills and an education system capable of providing the types of workers needed; and
- Where there are significant challenges for private sector led delivery, considering how public sector resource can unlock key priorities and enabling infrastructure. This also provides a huge opportunity to deal with legacy problems (e.g. vacant and derelict sites).

Section 4 sets out more thinking linked to the above.

### 3.7. Key Infrastructure Classes

SFT and the Scottish Land Commission ('SLC') produced the Enabling Infrastructure Interim Report<sup>13</sup> in 2019. It recognised that infrastructure is key to Scotland's future success. That report informed the ICS thinking in Phase 1 of its work.

The paper set out an "Infrastructure First" approach, enshrining the core principles of prioritisation, funding and delivery of infrastructure. It also considered how different spatial policies and activities at a local, regional and national level need to be coordinated and provided a framework for decision making. A key part of the paper was to develop a more informed understanding of the challenges and barriers faced as regards the development and delivery of key asset classes (e.g. social infrastructure (health, education) transport, utilities, green and leisure spaces).

The paper also considered the topic of land value uplift capture ('LVUC') and how different tools may support or hinder future activity, and indeed enable or hinder infrastructure delivery. The Infrastructure First principle and LVUC consideration, alongside the ICS' recommendations, will be important for future thinking about key assets we need to deliver (or re-use or re-purpose) and their funding and certainty of delivery.

### 3.8. Infrastructure Technology

As stated earlier, the crisis is an infrastructure and innovation opportunity. Infrastructure technology sits very much at the heart of this. Scotland's infrastructure is increasingly becoming digitally enabled. Technology and the management of information are seen as a key mechanism to secure improved performance in how we plan, invest, deliver and manage our infrastructure. The process of accurately creating and managing digital information within infrastructure is referred to as Building Information Modelling ('BIM'). BIM is fundamentally a collaborative process for generating and managing digital information to improve the sharing and analysis of data across the whole life of a building.

Infrastructure technology will also help to make the buildings we use more efficient and effective: virtual reality, 3D design, building sensors, laser scanning and cloud-based data sharing are examples of current technologies being applied in innovative ways. The opportunity exists to enhance and maximise the use of infrastructure technology through such interventions in both the short and medium term, and indeed these should be factored into the recovery thinking.

### 3.9. The Way Forward

There are clearly a number of factors and elements that need to be considered as regards future infrastructure priorities and the basis of public sector infrastructure investment. Key though is that any activity or proposal should be driven by the aim of achieving the kind of Scotland we want and the

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<sup>13</sup> <https://www.scottishfuturestrust.org.uk/storage/uploads/enablinginfrastructureinterimreport.pdf>

transition towards a greener, net zero and resilient wellbeing economy. The following section builds upon the above and seeks to capture initial thinking as regards the different stages of recovery and the types of activity and interventions which are critical to delivering such a vision.

## 4. The Approach to Identifying Interventions

### 4.1. Introduction

In relation to infrastructure and the built environment, SFT advocates an Infrastructure and Construction Green Recovery Plan. This will be a significant part of the wider economic recovery needed to help the country out of the current situation. This response needs to focus on how the public sector buys infrastructure from the private sector as its biggest client group; what we intend to buy to deliver the national outcomes and provide a pipeline of work; and the financial resources to fund that investment.

Much will also depend upon the capacity of the public sector (which will undoubtedly differ across the country and in key organisations such as local authorities) to go on making and delivering longer-term infrastructure investment plans and progress projects and sites whilst recovering from the crisis. It is also critical that future infrastructure strategies and policies (e.g. the Infrastructure Investment Plan ('IIP'), National Planning Framework 4, the Scottish Transport Projects Review and the Climate Change Plan, for example) are coordinated.

SFT has been working on the basis of this Infrastructure and Construction Green Recovery Plan. We have utilised the following terms:

- Restart of paused activity;
- Kick-Start of ready-to-go activity;
- Fresh-Start through the five-year Infrastructure Investment Plan (IIP); and
- Future Ready to further maintain the vision of an inclusive, resilient, net zero Scotland.

Our understanding is that AGER wishes to consider activities beyond the restart of paused and existing activities and a 'Kick-Start' phase (the remainder of this year). This paper therefore captures thinking as regards the horizon beyond the end of this financial year. By way of background, we describe the different phases on the following basis:

- **Restart** of paused activity: this is the current focus of a lot of activity for construction and focusses on the 'here and now' – it does not fall within the remit of this paper, however, further detail can be provided if of value.
- **Kick-Start** of ready-to-go activity: this identifies investment initiatives and projects that are in development and could be accelerated and/or implemented in the late summer/early autumn. There is likely to be a requirement to consider how these are prioritised in the short term, how that aligns with the next IIP and/or recommendations from ICS and meets longer term national outcomes. There will likely be an emphasis on activity that is aimed at existing asset renewal or maintenance of existing assets; both of which may already be in development but have not to date been prioritised for action or funding. A summary of the Kick-Start thinking has been attached at Appendix 2 for information.
- **Fresh-Start** - a five year investment programme: Given that infrastructure and wider construction project planning and development usually takes years before construction starts, it is critical that there is active consideration of the next wave of investment in the one to five year time horizon. This work will centre around the ongoing preparation of the Scottish Government's Infrastructure Investment Plan (IIP) and other strategies, and potential future interventions and activities. It may also include further support for industry, in particular, sub-sectors and / or geographies if private sector investment and strength remain weak.
- **Future Ready** to maintain a vision for a long-term inclusive, resilient and net zero Scotland. There remains a need to prepare for the longer term in terms of both the approaches to the prioritisation/strategy and planning/structuring stages of infrastructure. Ensuring that this is undertaken with a clear, long term future proofed approach is now even more important in

order to enable the economy and society to re-build. This activity builds upon the recommendations of the ICS and should be undertaken in parallel with the other activity strands.

It is a big challenge to look forwards at the moment, however, that is what is required for infrastructure investment planning where decisions now will lock in activity and outcomes from asset lifetimes of 60+ years. The crisis has not changed the fundamental infrastructure theme for the next 30 years: decarbonisation. There are opportunities to build on low carbon travel, digital ways of living and working to drive transport decarbonisation through demand reduction but the second major element of building and construction efficiency is an imperative.

## 4.2. Proposed Interventions

The following provides thoughts on the types of interventions and activities which could form part of the Fresh Start and Future Ready recovery phases. The interventions have been grouped under the key themes of Climate, Place and Inclusive Growth for convenience, although clearly there may be elements of all or some themes within each. These interventions should not be considered exhaustive and will evolve as we learn more about the state of the economy as lockdown is eased and the impact of the new ways of working necessitated by the virus such as social distancing become better known. Resilience is also a key consideration and will play an important role in the planning and delivery of those interventions.

### 4.2.1. Climate

#### 4.2.1.1. Introduction

An ambitious timescale has been set to reach net zero carbon by 2045 nationally and some key intermediary milestones along this path have also been put in place. The decisions taken over the next five years will clearly be crucial in determining whether this ambition can be delivered and also provide a good opportunity to support a green economic recovery from COVID-19. The recent letter from the Committee on Climate Change ('CCC') to Scottish Government Ministers<sup>14</sup> provides a good overview of the types of measures that need to be taken. A key underlying theme to all of this work is ensuring that no place or community (who are reliant upon polluting industries) are left behind and hence new jobs in these areas are found as part of a green recovery<sup>15</sup> and that steps are taken to green nationally important sectors and locations e.g. Grangemouth and Aberdeen. We also need to look at opportunities to generate green solutions from their by-products and waste. Picking up on a number of the points mentioned in the CCC letter in more detail, we would highlight the following:

#### 4.2.1.2. Upgrading of the Electricity Grid

The upgrading of the electricity grid will be important to support the roll out of EV charging points and heat decarbonisation (particularly in off gas grid areas) over the next five to ten years. Generally these investments are either paid for by the installer of a new asset (i.e. heat pump or charging point) or are added to the regulatory asset base ('RAB') of the distribution network operators ('DNOs') and paid for by all electricity consumers. It is difficult for the DNOs (Scottish Power Energy Networks and Scottish & Southern Energy Networks) to predict where investment is going to be required in their networks in order to include these in their regulatory period business plans and therefore a more flexible approach needs to be agreed with Ofgem for new investments in the grid within the price control

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<sup>14</sup> <https://www.theccc.org.uk/publication/letter-building-a-resilient-recovery-from-the-covid-19-crisis-to-roseanna-cunningham-msp/>

<sup>15</sup> For more on this see the interim report from the Just Transition Commission <https://www.gov.scot/publications/transition-commission-interim-report/>

period.<sup>16</sup> Direct taxpayer subsidy mechanisms could also be considered for some grid investments in rural areas where there is less support from Ofgem for additional costs being added to the RAB and commercial viability for new charge point and heat pump investment is already challenging. Such subsidy could be combined with a procurement of EV charging points in areas that are unviable for commercial operators and / or the roll out of heat pumps in off gas grid areas for lower income households. It should be noted that this is only one possible solution and we are aware that other models for delivery are currently being explored.

#### 4.2.1.3. Domestic Energy Efficiency and Heat Decarbonisation

In order to hit the target of a 75% reduction in greenhouse gas emissions by 2030, circa 600,000 residential properties are likely to need to install renewable heat sources – or 60,000 per annum. Most of these properties will also require a significant spend on energy efficiency measures<sup>17</sup>. Recent figures suggest that less than 1,500 (mainly heat pumps) were installed during 2019. Our kickstart proposals to double activity in 20/21 vs 19/20 (see Appendix 2) would be expected to use up existing capacity within the supply chain for installation work. In order to recruit and train up new staff (which SG can assist with through the skills and education sector), industry will require to see a pipeline of work for at least the following three years beyond March 2021. Setting out increased budgets for this period for Warmer Homes Scotland and the HEEPS (Home Energy Efficiency Programmes) Area Based Scheme as well as coordinating with UKG to put in place a longer term replacement for the RHI (Renewable Heat Incentive) scheme and associated local incentives would provide greater certainty<sup>18</sup>. In addition, raising household awareness (e.g. advertising) of the importance of replacing fossil fuel based heating systems for the climate emergency will be important in creating demand pull for installation and energy efficiency measures.

The focus of most attention regarding heat decarbonisation at this time is on off gas grid areas as there remains uncertainty as to whether the gas grid will be repurposed to supply hydrogen. UKG has committed to make a decision on this by the mid-2020s, but given the scale of the heat decarbonisation task an earlier decision on hydrogen is important. If the gas grid is repurposed for hydrogen, the task is reduced (but still significant) to changing the burners on all existing boilers. However, a late decision that this is not possible will increase the required rate of heat pump installations per annum to reach decarbonisation milestones beyond supply chain capabilities.

#### 4.2.1.4. Heat Networks

In densely populated areas (which therefore are on the gas grid) an important heat decarbonisation option comes from the investment in heat networks which provide heat to a large number of residential and some heat intensive commercial premises from a central plant. SG has been supporting the emergence of this sector through the Low Carbon Infrastructure Transition Programme ('LCITP') which provides grants (on a matched funding basis up to £10m) to assist with viability<sup>19</sup> and through the introduction of a Heat Networks Bill to the Scottish Parliament to create greater regulation and consumer protection. However, to bring a step change in investment in this sector, greater regulation (requiring commercial premises and more domestic properties to transition to a low carbon heating source by a pre-determined date) and possibly requiring certain large heat load

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<sup>16</sup> Scottish DNOs and SG are currently preparing a joint submission to Ofgem on this subject.

<sup>17</sup> For more on the Energy Efficiency Scotland Programme: <https://www.gov.scot/policies/energy-efficiency/energy-efficient-scotland/>

<sup>18</sup> BEIS are currently consulting on how to replace the RHI Scheme <https://www.gov.uk/government/consultations/future-support-for-low-carbon-heat>

<sup>19</sup> <https://www.gov.scot/news/gbp-30-million-for-low-carbon-projects/>

premises to connect up when they are located within a heat network zone will need to be considered in order to reduce demand risk and hence improve viability.

#### 4.2.1.5. Non Domestic Energy Efficiency

It is important that the public sector lead the way in improving the energy efficiency of many of their existing buildings over the next five years (and therefore more capital budget will need to be found). This will have the effect of building up the supply chain capability in Scotland to carry out these works and allow SG to provide some lead time to the private sector before they are also required to carry out retrofit works. SFT has developed a framework for capital and revenue funded energy performance contracts and a support unit to assist public organisations deliver this important work.

SFT is assisting in the development of new building regulations regarding the required energy efficiency and carbon impact of new commercial buildings. This work needs to be accelerated such that public sector and private sector have greater certainty that they are establishing a future ready facility and whether the costs of doing this are affordable and that the investment remains viable.

#### 4.2.1.6. Carbon Capture Usage and Storage (CCUS)

The Climate Change Committee have made it clear that the development of carbon capture usage and storage ('CCUS') remains a vital part of the mix in the UK reaching net zero carbon by 2050. The UKG Budget in February 2020 announced a CCUS fund to establish at least two UK sites, one by the mid-2020s and a second by 2030. One of the five UK sites / clusters is located in Scotland - Project Acorn in Aberdeenshire - which proposes to repurpose an existing oil pipeline to transfer carbon dioxide back beneath the sea bed as well as produce 'blue hydrogen' as a low carbon fuel source for industry and transport. SG is limited in its powers to enable this important project to be prioritised as energy regulation and policy is set from Westminster. As suggested by the ICS (recommendation 17) the SG and UKG should work together to develop a devolved regulatory and pricing framework that enables energy infrastructure investment to be planned and delivered to meet the future needs of Scotland.

#### 4.2.1.7. Electric Vehicles and Charging Infrastructure

The CCC made clear in their Progress Report to SG in December 2019 that current purchasing trends of electric cars and vans were inconsistent with meeting emissions targets<sup>20</sup>. They recommended increasing the incentives to purchase cleaner vehicles and to consider bringing forward the target date for the end of the sale of new petrol and diesel cars or vans from 2032 to 2030. Consistent with these recommendations, it is suggested that incentives for EV purchase and the installation of home charging points could be increased in 20/21 (see Appendix 2). These incentives could probably continue into 21/22 and possibly beyond.

A key priority for beyond 20/21 is to ensure that the rollout of a network of roadside charging points continues at pace in densely populated areas and that a (smaller) network exists at all in rural and remote locations. A key reason for the lack of demand for EVs is range anxiety concerns from drivers on long journeys. To reduce these concerns, investment in more high powered charge points across Scottish motorways and major A roads needs to proceed ahead of customer demand which suggests there cannot be a reliance on commercial providers alone, who will tend to proceed more slowly in line with visible current demand (otherwise there will remain a 'chicken and egg' problem). In more rural A road locations, commercial operators may not invest at all and therefore a form of (probably separate) government intervention needs to be deployed to see investment in these areas as well. There may be an opportunity to dovetail some of this with other investment activities – such that the

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<sup>20</sup> <https://www.theccc.org.uk/publication/reducing-emissions-in-scotland-2019-progress-report-to-parliament/>

technology is smart and can collect and feed data for future decisions. For instance, the Reaching 100% and existing SG Broadband programmes may give the opportunity to promote efficiencies and connect different programmes.

There is an opportunity to explore how public sector assets could be used for the provision of EV charging points particularly for the public sector and the “blue light” services.

In addition, a plan needs to be put in place to see the transition of public sector vehicles, buses and HGVs from internal combustion engine models. It appears likely that electricity will be the power source for most public sector vehicles (including refuse trucks but possibly excluding fire engines) and for shorter distance buses, but hydrogen fuel cells are most likely for most HGVs and long distance buses. SFT is working with Transport Scotland on the best approach to procure the necessary EVs for the public sector. There appears to be less progress in engaging with hauliers around hydrogen powered HGVs and the infrastructure required for a network of hydrogen refuelling stations.<sup>21</sup>

It is also important that an appropriately trained workforce is available to service and repair EVs and hydrogen fuelled vehicles as well as suitably equipped workshops.

## 4.2.2. Place

### 4.2.2.1. Introduction

Key partners have been putting an increased emphasis on Place for some time and having a coherent approach around Place and hence how the public sector delivers services and invests in infrastructure is becoming even more urgent as the economy recovers from the pandemic.

### 4.2.2.2. Shared Public Sector Facilities and Placemaking

SFT, particularly through the leadership of the hub programme, has devoted significant effort over the past decade to encourage public sector body collaboration which at its best can lead to an improved shared public sector service (such as the integration of health and social care), delivered in a joint building which is more efficient and more convenient for the public it serves. This work carries on through hub and through our Asset Strategy and Placemaking work (enshrining the Place Principle) which encourages central government agencies, local authorities and others to share buildings at each of city, town and rural levels and re-imagining town centres and investing in placemaking and place programmes. This collaborative effort and placemaking work is becoming even more important at a time when new investment and thought is required to respond to challenges for Scotland’s communities and climate change, public sector budgets are likely to face increasing constraints and small towns and rural areas need a linchpin facility (e.g. a Rural Hub) alongside an investment in place to sustain the community, create jobs and prevent depopulation. Therefore, more investment for such place change programmes and joint facilities (such as Rural Hubs) needs to be found. Funding and support to individual public bodies should be conditional on appropriate levels of collaboration and a wider commitment to placemaking.

The response to COVID-19 has also triggered and strengthened community and volunteer capacity and capability. A key question is how do we maintain those community anchors (who very much have a role in delivering local services, support and infrastructure particularly in rural and remote locations) and help them attract investment and community resilience. This would facilitate further testing of place-making approaches and programmes, and indeed link to elements such as the Rural Hubs activity. The other key element to be considered is how the public sector could work with an expanded community and third sector.

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<sup>21</sup> There are currently 17 publicly accessible hydrogen refuelling stations in the UK.

### 4.2.3. Land

#### 4.2.3.1. Introduction

The availability and use of public land and land powers will be important for embedding the recovery and ensuring that the necessary interventions can be delivered. There are a number of areas which can assist with our future approach to economic investment and wellbeing in Scotland and enabling a green recovery.

#### 4.2.3.2. Strategic Site Assembly

Strategic site acquisitions by public sector bodies to assemble sites for subsequent disposal and development or to facilitate public sector led regeneration projects particularly for Town Centre regeneration by Local Authorities will be key in moving forward. This will require both resources and funding, as well as exercising more freely available powers (such as Compulsory Purchase Orders) to achieve this effectively and timeously. Opportunities are likely to exist to purchase distressed assets at historically low values.

#### 4.2.3.3. Vacant and Derelict Land

SFT, working with the Scottish Land Commission and other public sector partners, has considered the impact of vacant and derelict land in Scotland. A vision as to how to address such blight has been outlined by the Scottish Land Commission's Vacant & Derelict Statement of Intent<sup>22</sup>. This work needs to be supported, funded and advanced by the wider public sector to drive the key tenets of place, inclusive growth, climate and resilience around problematic sites and community wellbeing.

#### 4.2.3.4. Demolition and Public Led Delivery

The public sector has a key role in preparing land for development and use. As highlighted previously, this can be about land remediation and site preparation and delivering initial enabling infrastructure to improve the attractiveness of sites. It could also undertake activity such as demolition, again to enhance the marketability and value of land. Much of this can link to an approach based upon public sector led delivery and the vision for land and assets it wishes to dispose of or use in alternative ways.

#### 4.2.3.5. Using the Value of Public Sector Land and Assets to Deliver Wider Outcomes

As the ICS has highlighted, there may be an alternative way to value public sector assets and their use. Thought should be given as to how the value of wider benefits can be captured as part of the consideration of how public land and disposals are assessed. For example, where appropriate, the disposal could be conditional upon a larger percentage of affordable housing (normally typically 25%) being delivered on that public sector site.

#### 4.2.3.6. Public Sector Disposals linked to New Capital Projects

The importance of public sector property and land disposal programmes and the effectiveness (skills and capacity which may be reduced) of the current approach and governance in securing 'best value' linked to ICS recommendations and existing SPFM guidance should be reviewed. The outcome of that review would provide both clarity and identify where strengths and resource can be brought to bear to ensure land disposals will lead to further activity in as short a timescale as possible.

#### 4.2.3.7. Planning

The Planning (Scotland) Act was passed by the Scottish Parliament in June 2019. This enshrined change in the planning system and where further activity is to take place. Work initially focussed on

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<sup>22</sup> [https://landcommission.gov.scot/downloads/5dd40380c9791\\_VDL-STATEMENT-OF-INTENT\\_final-17.7.19.pdf](https://landcommission.gov.scot/downloads/5dd40380c9791_VDL-STATEMENT-OF-INTENT_final-17.7.19.pdf)

process changes. There is, however, a need to accelerate thinking in a number of other areas which materially impact upon the delivery of infrastructure (and its changing nature) and the value of land. Such activity includes:

- Understanding and evolving the current thinking behind developer contributions (section 75). How can this adequately support future development; how is it performing to date and is it fit for purpose? Whilst this is under consideration, a short term focus on how the public sector can support section 75 commitments in the short term to enable development activity would be worthwhile. This could include, foregoing these (with backfilling from Scottish Government), considering their timing (against development rather than upfront ‘chunked’ payments) with support for local authorities if such sums are not forthcoming. Such an approach was adopted at Winchburgh<sup>23</sup>.
- Developing further the concept a prioritised Infrastructure First<sup>24</sup> approach to planning and delivery. This Infrastructure First approach means identifying and addressing the infrastructure capacity and requirements arising from a development(s) at a local, regional and national basis. Such an approach is aimed at providing certainty and coordination.
- Allied to this, is how should land be valued, and how should development contributions to infrastructure be captured? Further thought needs to be given to how Land Value Uplift Capture tools (such as the Infrastructure Levy) apply to enabling infrastructure in Scotland and indeed, their relevance<sup>2526</sup>. This is particularly key for the delivery of regionally important infrastructure, where the limitations of section 75 can see it remain unfunded or problematic. Again, in the short term (and beyond) there may be a rationale for the wider public sector to consider meeting such regional infrastructure cost to accelerate large scale development, recognising the wider outcomes as the key driver for support i.e. it goes beyond a cost of infrastructure consideration.
- Advancing approaches which ease the planning process burden and cost: for instance, advancing Masterplan Consent Areas<sup>27</sup> (the evolution of Simplified Planning Zones) which will accelerate development in line with initial plans. Such an approach also potentially has a key role for the public sector to advance early plans and requirements and seeking permissions for these. Again, this eases the burden on future developments and developers.

#### 4.2.3.8. Smarter Offices

SFT has an existing workstream working with public sector bodies to consider their office space requirements and to encourage the sharing of buildings with other public sector organisations. Two collaborative, net zero carbon civic centres (Falkirk and Stirling) have been identified as key projects. The initial feedback from public bodies since lockdown has been a greater willingness to embrace home working and therefore engagement will continue to assess the changes to the office layout required. Resilience is also becoming an important factor. If there is less physical space required, how do we transform Scotland’s public sector in terms of delivering services and the technology and the infrastructure required for this?

<sup>23</sup> <https://news.westlothian.gov.uk/article/38170/Landmark-investment-deal-for-Winchburgh>

<sup>24</sup> <https://www.scottishfuturestrust.org.uk/storage/uploads/enablinginfrastructureinterimreport.pdf>

<sup>25</sup> <https://www.gov.scot/binaries/content/documents/govscot/publications/factsheet/2017/01/infrastructure-charging-mechanism-research-report/documents/review-planning-system-research-infrastructure-report-pdf/review-planning-system-research-infrastructure-report-pdf/govscot%3Adocument/Review%2Bof%2Bthe%2BPlanning%2BSystem%2B-%2BResearch%2B-%2BInfrastructure%2B-%2BReport.pdf>

<sup>26</sup> <https://www.scottishfuturestrust.org.uk/storage/uploads/enablinginfrastructureinterimreport.pdf>

<sup>27</sup> <https://www.gov.scot/publications/transforming-planning-practice-post-bill-work-programme/>

#### 4.2.4. Inclusive Growth

##### 4.2.4.1. Introduction

Scottish Government's aim is to achieve economic growth that combines prosperity with greater equality and creates opportunity for all. In infrastructure terms this means that everyone should have digital connectivity to support jobs and lifestyles in more remote locations, access to appropriate housing needs to be improved and economic growth needs to be spread more widely.

##### 4.2.4.2. Digital

The need for good connectivity across all areas of Scotland has been emphasised during the COVID-19 lockdown as many people have been required to work from home and this has been lacking in semi-rural and rural areas. Addressing this deficiency is only going to become more important as more public services (such as health and education) are delivered online and the lockdown accelerates the existing trend of working from home which is expected to continue once the crisis has passed. The lockdown has hit the rural economy hard and therefore improving connectivity is also important to support economic recovery in these areas by supporting businesses.

There are already plans in place to address many of these issues and therefore the emphasis is more on ensuring there is sufficient support to ensure this investment gets through and its impact is maximised. The Reaching 100% ('R100') programme<sup>28</sup> to boost broadband in rural areas and the recent announcement of the Shared Rural Network (SRN)<sup>29</sup> to improve mobile connectivity in rural areas is expected to bring about a £1bn investment into rural parts of Scotland over the next 5 years. However, there is a shortage of public sector resource with digital skills at a local authority, regional or national level to join things up with the private sector and hence make sure that the impact of investment is maximised. Likewise, a key factor will be ensuring the skills, capability and opportunities of such activity are fully exploited and can be used to drive and enable innovation in areas such as sensors, smart networks and performance and data collection, for example. Therefore, we recommend that resource be found to address this gap and consideration is given as to where to position this capability organisationally.

The R100 and SRN programmes are designed to maximise 4G and broadband connectivity and hence increase the resilience of rural communities. Right across all of Scotland there is also a significant economic opportunity by maximising the potential of 5G deployment. Deloitte estimated in a recent report<sup>30</sup> that Scottish GDP could be over 8% higher than the baseline by 2035 if there is accelerated investment in 5G and the resultant connectivity is used to drive transformative use cases such as digital public services and the new uses of data using artificial intelligence and machine learning tools. SG is investing £5.3m in the Scotland 5G Centre to accelerate the adoption of 5G and it is important that further public investment in this area is prioritised as part of an economic recovery from the pandemic.

International connectivity is an area in which Scotland is behind the pace and this could be a key area of the recovery as it would improve the resilience of Scottish businesses and make Scotland a more attractive location for new inward investment. Currently, international internet connectivity from Scotland is all routed through London. This is an area that the SFT Digital Team has been working on for several years, engaging with the private sector to understand the barriers to investment in

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<sup>28</sup> <https://www.gov.scot/publications/reaching-100-superfast-broadband-march-2020-update/>

<sup>29</sup> <https://www.gov.uk/government/news/shared-rural-network>

<sup>30</sup>

<https://www.scottishfuturestrust.org.uk/storage/uploads/deloittesfteconomicimpact4g5gfinalreportforpublication.pdf>

Scotland and with SG to develop a strategy. SFT supported the commitment reached between Celtic Norse AS and Simec Atlantis Ltd to land a branch of the planned Norway to Ireland subsea cable in Northern Scotland. We consider that the private sector are unlikely, at least in the short term, to invest in international links from Scotland to both Ireland and the Netherlands and therefore a public sector procurement could be carried out to find a provider to complete these important links – the upfront capital cost to the taxpayer could be around £50m, but the benefits would far outweigh this cost. A Deloitte report which was commissioned by SFT concluded that, under a range of different scenarios, the additional Gross Value Added (GVA) from enhanced international connectivity, with associated growth in the Scottish datacentre sector is between £200-400m per annum and would create 1,500-3,200 new, high quality jobs<sup>31</sup>.

The other area of important digital investment that requires public support is data centres which could improve the resilience of cloud storage in Scotland. This would improve the conditions for private sector investment and bring substantial cost savings to public sector operations whilst also providing greater scope for the roll out of more online public services. Data centres require substantial amounts of electricity and therefore are looking to source renewable energy which is relatively abundant in Scotland. However, the major providers (such as Amazon Web Services, Google and Facebook) also need upfront demand, land availability and good telecoms (fibre) connections. There is an opportunity to rationalise public sector data storage whilst also providing an ‘anchor tenant’ for a major new datacentre. A procurement could be carried out that provides a suitable area of land with good telecoms connections and guarantees a minimum level of public sector usage, enabling activity and the adoption of new consistent standards.

Infrastructure technology can also play an important short term and medium term role in responding to COVID 19. Infratech tools can assist contracting authorities with free viewer technologies to enable clients and stakeholders to “walk” 3D models remotely, scanning technology to support remote surveys, photogrammetry technology to record the condition of a site at closure and during construction thereafter. Much of this can then be translated into new and better ways of for developing new facilities and managing maintenance and lifecycle works.

#### 4.2.4.3. Housing

There continues to be a significant shortage of housing of all tenures in Scotland. Therefore, there is an opportunity for increased housing investment across the public and private sectors to support an infrastructure recovery from COVID-19. Housing supply had been increasing, helped by SG’s substantial commitment to deliver 50,000 new affordable houses over the five years to March 2021, but the combined effect of the economic shock on private ‘for sale’ housing and the end of the government investment programme is expected to see a substantial reduction in supply from the 20,000 houses built during 2019. Estimates vary as to the number of new homes needed per annum in Scotland, but most would put this between 30,000-35,000.<sup>32</sup> This housing shortage is manifested in rising rents in the Edinburgh and Glasgow areas and increasing house prices which makes house purchase difficult particularly for many under the age of 35 who cannot source a deposit from family, despite record low interest rates.

In terms of public sector housing provision, the big question remains how to best support affordable housing provision post March-2021, when the expectation is that the grant levels will be much lower than those which underpinned the 50,000 commitment. Making the most of the reduced grant levels

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<sup>31</sup> <https://hostinscotland.com/storage/72/SFT-enhanced-connectivity-report-FINAL.PDF>

<sup>32</sup> Scottish Government’s vision for housing in 2040 would imply an even bigger annual supply than this: <https://www.gov.scot/publications/housing-to-2040/>

could be one theme as there should be scope to deliver social housing for less grant than £70,000 per unit by deploying greater economies of scale through standardising designs and encouraging greater innovation in offsite manufacture. On the former, more financial support (although less per unit) should be provided to larger local authorities, housings associations and other housing delivery partners that are capable of more efficient delivery. On the latter, consultation needs to take place with offsite manufacturers to understand the barriers to bringing down the cost of each unit – part of this is likely to be the provision of pipeline to allow investment in throughput.<sup>33</sup> Alternatively, a centralised approach could be taken to the procurement of affordable homes across Scotland using off site construction methods.

In terms of private sector housing provision, more government support is required to assist housing supply e.g. extending Help to Buy to sustain demand.

Scotland has been slow to see institutionally backed large scale rental provision develop (so called ‘Build to Rent’). Encouraging this sector to develop over the next five years has become even more important in the current economic environment to sustain the construction sector, relieve pressure on rising rents particularly in Glasgow and Edinburgh and provide high amenity new housing for the younger generation who may be even less equipped or less willing to buy a property. SG could deploy more loan capital (‘financial transactions’) to co-invest with early investors in this sector. This investment could be provided by the Scottish National Investment Bank or the Building Scotland Fund.

Councils and other providers could also be encouraged to provide new forms of ‘market’ supply such as rental homes at a rent of around 120% of the local housing allowance to tenants who (just) do not qualify for affordable housing, housing for sale and specific housing for older people (both for rent and for sale).

There is a particular need for housing for older people that is currently not met. In order to incentivise house builders to build age appropriate homes, Councils could be encouraged to count a percentage of those homes as affordable.

Scottish Government could also be investing greater sums to unlock large strategic housing sites capable of providing a mixed tenure of affordable rent, market rent and market for sale units. SG is arguably in a significantly better position than local authorities to offer such funding, loans and / or guarantees, given the risk involved. These sites often have large upfront infrastructure requirements. Given the timescale (and risk) between the upfront investment required and the eventual sale of housing, which can take 15-20 years in some cases, there is an important role for government in lending money with a security on the land value to unlock more of these sites. SFT supported SG on an early exemplar of this model on the Winchburgh site in West Lothian which provided a combination of SG loan and guarantee.<sup>34</sup> Similar to any public sector Build to Rent investment, deploying banking / investment skills to protect taxpayers money is important, which will also provide greater confidence to the private sector to engage in negotiations.

#### 4.2.4.4. Education

SG have made substantial investments over the past decade in replacing the poorest condition primary and secondary schools and also investing in new early learning and childcare facilities in order to

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<sup>33</sup> SFT is currently supporting City of Edinburgh Council who are working with industry body Offsite Solutions Scotland. <https://offsitesolutionscotland.co.uk/about-2/>

<sup>34</sup> For more detail, see press report: <https://news.westlothian.gov.uk/article/38170/Landmark-investment-deal-for-Winchburgh>

deliver a commitment for 1,140 hours of funded high quality early learning. For the next phase of the Learning Estate Investment Programme<sup>35</sup>, consideration will need to be given as to whether the footprint and digital capability of a secondary school (in particular) need to be adapted to continue some aspects of the online learning that has been delivered during lockdown.

#### 4.2.4.5. Economic Investment

The aspiration of the AGER is understanding how Scotland's economy should transition in the future. There will be a number of sectors, developments and sites which will be key to this. Collaboration across public and private sectors entities will be essential. The focus should therefore be about how we prioritise such activity, recognise the importance of clustering and resource ourselves to enable and support it. There are a number of ways in which this could happen:

- By prioritising funding and support from the wider public sector to collectively advance collaboration and delivery, this can greatly aid plans for strategic plans and sectors, developments and sites becoming a reality. This is discussed later in the Resources (Section 4), however, it highlights the importance of having resource to call upon to do this.
- Linked to the above is also the need to support already committed economic investment e.g. City and Growth Deals. Significant time and effort has been given to developing such proposals and plans, however, they have now encountered a delivery challenge, both in terms of having funding for revenue costs available and sourcing people with appropriate skills to lead the delivery of the economic investment. A focus on the provision of resources for the public sector is key.
- Recognising clustering is key to future investment and growth. By understanding the wider strengths and locations of expertise and sector clusters across Scotland, we can take decisions as regards where we target investment and support to compliment and grow these clusters, rather than creating internal competition. This will also be particularly key for place considerations and rural economies and growing clusters around the green and blue economies, for example.
- Innovation Acceleration and Partnership: COVID-19 provides an opportunity to revisit the innovation centres currently planned under the City and Growth Deals. Whilst collaboration between universities should be encouraged, any duplication of activities should be avoided. In addition, the proposed amount of new and planned innovation space should be reviewed on that basis and any funding no longer required should be re-allocated or directed to the re-use, re-purposing or upgrading of existing assets.
- The Expansion of Successful Approaches: As highlighted in the Kick-Start thinking, there are a number of successful approaches which could be expanded in monetary and reach terms that deliver the key themes outlined earlier: the Regeneration Capital Grant Fund, the Vacant and Derelict Land Fund (both Scottish Government) and Place Programmes (supported by SFT). These have been successful, and their expansion would create more opportunity.

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<sup>35</sup> <https://www.gov.scot/publications/learning-estate-investment-programme-funding-details/>

## 5. Resources

### 5.1. Introduction

There are two further key elements critical to the delivery of an Infrastructure and Construction Green Recovery Plan:

- The Funding and Financing ‘toolbox’; and
- Capability and Capacity – People.

### 5.2. The Funding and Financing ‘Toolbox’

The proposals outlined in Section 3 above capture a series of different funding and financing tools. There is an important distinction between these tools:

**Funding** is an amount of money (e.g. grant) provided by an organisation on the basis of an agreement for a certain output or outcome. It is usually free of charge to enable an activity which would otherwise have not been forthcoming. There may be certain contractual requirements in that agreement but there are no requirements to pay back the capital.

**Financing**, on the other hand, is an amount of capital or a sum of money (e.g. a loan) provided to an organisation with the expectation for it to repay the capital amount along with a certain percentage of interest. It is usually provided by financial institutions like banks, or investors such as venture capitalists or institutional investors, and for local authorities through the Public Works Loan Board. Finance can be critical when there are lags in funding.

This distinction is key in that the application of a tool will have a different impact upon each beneficiary or recipient. Certain tools will work better for different interventions. The tool will also dictate the quantum of any funding and/or financing and how these may need to be combined to deliver key priorities. There follows a list of some of the funding/financing tools that could be used:

- The Scottish Mutual Investment Model<sup>3637</sup>: the approach looks at a new profit-sharing finance structure, which includes the public sector as a co-investor and co-owner of up to 20% of each project delivery company.
- The National Housing Trust and its derivatives: utilising Scottish Government guarantees to unlock the use of public sector borrowing capability to secure private sector investment and housing development for mid-market housing;
- Taxation Incremental Financing: utilising public sector borrowing to deliver enabling infrastructure to then be repaid from future non-domestic rates collected from new economic activity; and
- Outcomes based funding approaches: the payment of Scottish Government revenue grant against the achievement of key outcomes and underpinned by enabling infrastructure.

SFT will continue to consider new and innovative approaches to funding and financing. One area which is of great interest, is a potential shift in how we pay for infrastructure particularly for some of the newer asset classes, such as telecoms and digital connectivity. At either end of the spectrum is infrastructure that is either paid for by Government or paid for by its users / by the private sector. There are then a series of other options, such as:

- Financeable outcomes: public sector borrowing to enable change and repaying this against future savings or enabled income e.g. spend to save under non-domestic energy efficiency programmes or the outcomes based funding approach of the Growth Accelerator/LEIP (Learning Estate Investment Programme)/Green Growth Accelerator;

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<sup>36</sup> <https://www.scottishfuturestrust.org.uk/page/mutual-investment-model>

<sup>37</sup> <https://www.scottishfuturestrust.org.uk/storage/uploads/sftoptionsappraisalreportlowres.pdf>

- New user charges (possibly with targeted elements of subsidy to enable change) for new infrastructure such as Electric Vehicle charging, digital networks and carbon capture storage;
- The widening of the Regulated Asset Base ('RAB') model to areas such as digital connectivity (as well as digital's regulatory devolvement to Scotland);
- Single asset RAB for national critical infrastructure; and
- The use of Income Strip models for property developments<sup>38</sup>.

Thought also needs to be given to how the public sector finances infrastructure activity. This includes strengthening the activity of the Building Scotland Fund and SNIB.

SG capital borrowing powers were set out as part of the 2016 Scotland Act (currently £450m per annum up to a cap of £3,000m). SFT suggested in its evidence to the Smith Commission<sup>39</sup> in 2014 that there should not be such a limit, and an extension of these should be urgently considered particularly in light of the economic crisis. Local authorities can also borrow under the Prudential Borrowing framework. HM Treasury's autumn 2019 decision to increase PWLB lending margins from 1.8% to 2.8% should also now be reconsidered, given the importance of public sector investment to sustain economic activity.

Ultimately, infrastructure needs to be paid for – this can be done in a myriad of ways as the above shows. The consideration of new, or combined, approaches to funding and financing infrastructure, would be a valuable exercise, and clearly fits with any thought around delivering a green recovery and a wellbeing economy.

### 5.3. Capability and Capacity – People

To investigate and achieve the many aspects of this paper, needs the expertise, capability and capacity of appropriately skilled people. Historically, a key challenge to delivering change and the aims and aspirations of the public sector has been access to such resource. This needs to be addressed to achieve the 'transition'. There will be a need for all organisations to work differently and pool resource and expertise further. It may also result in a need for reprioritising activity for the greater good. There are several ways in which focussed resourcing could work:

- Central funding for local and community resources: Rather than the offer of funding for 'shovel ready' projects (we have found that there are very few such projects that have not secured funding at the point of being "shovel ready"), such funding could be made available to support local authorities and community organisations to employ more staff or use private sector resource to help deliver projects.
- A central "Strategic Sites" support team: This builds upon current thinking and activity, whereby a number of national agencies have come together to address the various barriers to development of those sites. The approach is designed to be short term and targeted. It is currently only used for sites considered as being strategic by Government but could be expanded to include sites that are important to local authorities.
- A centrally established delivery support team: This would see a multi-disciplinary team (e.g. planning, design, procurement, construction and operations) who would be tasked to deliver and monitor strategically important projects.
- A "National Developments" delivery team: Again, building upon the "Strategic Sites" approach, cross-agency approach, teams would be created to support National Developments

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<sup>38</sup> At its simplest, an income strip investment combines a strong tenant covenant, with a long-term lease and a forward funding arrangement to give an investor a stable and secure income stream.

<sup>39</sup> [https://www.scottishfuturestrust.org.uk/storage/uploads/Smith\\_Commission\\_SFT\\_31\\_October.pdf](https://www.scottishfuturestrust.org.uk/storage/uploads/Smith_Commission_SFT_31_October.pdf)

identified in NPF4. This would demonstrate the importance of those projects to the country. It would also enshrine collaboration and coordination at an early stage.

We are aware that economic development and project delivery resource has been impacted by the current crisis with public sector teams diverted to deal with the immediate response to it. This is particularly true of small local authorities. That capability will hopefully be built up again in time but in the short term, national and regional agencies could provide 'backfill' support, with a view to understanding the longer term need.

## 6. Conclusion

Infrastructure has a key role to play in both the immediate recovery and Scotland's transition towards a greener, net zero and wellbeing economy. The recovery allows us to 'build back' a more resilient infrastructure which recognises that elements such as education, skills, innovation and technology are key to fully exploiting its opportunities and one which better reflects the future needs of Scotland: quality, fairness and inclusion and ensuring a strong indigenous construction and contractor base that will be more capable of coping with future challenges. It also allows us to enshrine the principles of Place, Inclusive Growth and Climate in all we do to drive prioritisation and decision making, ensuring that the right decisions are made for the right places at the right time: there is 'no one size fits all solution'.

SFT very much sees itself at the heart of this infrastructure response. We will build upon the capability of the organisation to ensure change is effected and takes hold for the better. We can also clearly see where change needs to happen in the processes and systems that exist and the interventions that matter. We do, however, recognise that we never work in isolation: collaboration and partnership across the public, private and third sectors is key to success. Collectively we can make a difference to the future impact and performance of infrastructure in Scotland.

We would be happy to discuss our response with AGER if that was thought to be useful.

## Appendix 1: Infrastructure Commission of Scotland: Summary of Recommendations

Principle	ICS Detailed Recommendations
Leadership	<ol style="list-style-type: none"> <li>1. 2020 Infrastructure Investment Plan should be prioritised against available inclusive net zero carbon economy outcomes.</li> <li>2. The SG should, by 2021, develop and publish a new infrastructure assessment framework</li> <li>3. The SG should publish by 2023 a system wide Scottish Infrastructure Needs Assessment</li> <li>4. A fully updated Infrastructure Investment Plan should be developed by the SG for publication by 2025 using the new assessment framework and methodology and informed by the Infrastructure Needs Assessment.</li> </ol>
Place	<ol style="list-style-type: none"> <li>5. Place based assessment of long term housing supply and demand across Scotland by 2021, supported by the development of a coherent strategy for the labour market and business opportunities arising from an inclusive net zero carbon economy.</li> <li>6. To support the implementation of National Planning Framework 4 and the new system of development plans, a co-ordinated and appropriately resourced Infrastructure First approach to the planning system should be introduced by the SG by 2021.</li> </ol>
Making the most of existing assets	<ol style="list-style-type: none"> <li>7. By end of 2020, all public sector infrastructure asset owners to develop asset management strategies</li> <li>8. SG to issue guidance for relevant authorities on a whole-life approach to infrastructure maintenance and prioritisation.</li> <li>9. Presumption against like-for-like replacement of existing assets and the construction of new, single purpose assets in favour of shared facilities.</li> </ol> <p><b>Resources</b></p> <ol style="list-style-type: none"> <li>10. By 2023 the SG should establish a route map for the implementation of a viable outcome focused system of resource use, reduction, collection, treatment and repurposing.</li> <li>11. By 2023, the SG should develop a clear implementation plan to address critical natural and built infrastructure climate resilience and adaptation needs.</li> </ol>

Principle	ICS Detailed Recommendations
Heat and Transport	<p><b>Decarbonisation</b></p> <p>12. By the end of 2020, accelerate the development and implementation of incentives, support mechanisms and standards for energy efficient, net zero carbon buildings across Scotland.</p> <p>13. By 2022, the SG, local authorities, regulators and industry should work together to establish a route map for the transition to net zero carbon that in combination addresses heating for domestic, commercial and public buildings as well as all surface-based transportation.</p> <p><b>Transport</b></p> <p>14. NTS and STPR2, fully reflect the need to deliver an inclusive net zero carbon economy and consider the infrastructure and the use of it as a holistic system.</p> <p>15. By the end of 2021, develop a new Transport investment appraisal and decision-making process, incorporating necessary changes to the current STAG and Investment Decision Making Guidance.</p> <p>16. SG and UKG should commit to work together to establish a charging/payment regime alternative to the existing fuel and road taxation based structure. Consider options that could provide a more stable long term investment regime for the management and maintenance of road infrastructure.</p>
Regulation	<p>17. Building on the findings of the recent UK National Infrastructure Commission review of Energy and Telecoms regulation, the SG and UKG should immediately commit to work together to develop by 2021, an appropriately devolved regulatory and pricing framework that enables energy and telecoms infrastructure investment to be planned and delivered to meet the future needs of Scotland.</p> <p>18. Building on the existing plans, the SG should by 2021 consider options for longer term implementation and regulatory coherence across water provision and flood management /resilience.</p>
Digital & Technology	<p>19. In conjunction with the regulatory reforms highlighted in 17, the SG should provide the leadership required to ensure the delivery of a full fibre network for Scotland by 2027 to enable the transition to 5G across the whole of Scotland.</p> <p>20. To ensure Scotland’s place in the world and increase its international presence and connectivity resilience, the SG should prioritise support for an indigenous data centre market and investment in direct international fibre optic cables.</p> <p>21. From 2020, the SG should consider the future data requirements and data potential for all new publicly funded infrastructure as well as the potential for the use of digital services associated with the assets.</p>
The Role of the Public	<p>22. By 2022, capacity and capability requirements for an informed approach to public engagement and participation needs to be clearly established and implemented by the SG, to ensure that short and long term outcome trade-offs are effectively debated, understood and taken into consideration.</p>

Principle	ICS Detailed Recommendations
Independent long-term advice	23. By 2021, a body should be given the responsibility by SG to provide independent, long term, evidence-based advice to Scottish Ministers on investment decisions for the social, economic and natural infrastructure needs and priorities required to deliver an inclusive net zero carbon economy.

## Appendix 2: Kick-Start Proposals

### Net Zero Carbon

1. Street Lighting - SG Capital could be used to accelerate investment into LED lighting by Local Authorities
2. Non-Domestic Energy Efficiency – significant investment on 6 identified capially funded Energy Performance Contracts across five Local Authorities and one Health Board.
3. Domestic Energy Efficiency and Heat Decarbonisation – Double the level of recent heat pump installations and associated energy efficiency measures into low income households.
4. Electric Vehicles and Charging Points – Double the incentives for household EV purchase and installation of charging points. Further funding to provide greater incentives for workplace chargepoint installation and to incentivise the scrappage of the worst polluting taxis and their replacement by EV.

### Place

1. A fund and resourcing support to Local Authorities faced with s75 renegotiations due to changed viability because of the economic downturn.
2. Boost the size of the Vacant & Derelict Land Fund and the Regeneration Capital Grant Fund (Scottish Government).
3. Rerun the Scottish Government Town Centre Regeneration Fund – particularly with a focus on town centre living (e.g. re-purposing retail and commercial units to housing of different tenures).
4. Purchase of land opportunities for future infrastructure projects, opportunistic buyout of public sector leaseholds and the purchase of buildings for conversion to rural hubs.
5. Investment in business critical maintenance in key public sector accommodation and roads.
6. Further development of the Smart Campus Project with the Scotland 5G Centre.

### Inclusive Growth

1. Capital to support increase in temporary school accommodation to support social distancing.
2. Purchase of computers / tablets to facilitate online learning for children from deprived households.
3. Investment in future rural mobile sites to extend connectivity as part of the S4GI programme.
4. Capital to housing associations and Local Authorities to purchase unsold residential stock for social housing provision.
5. Capital grant or financial transactions to mid-market housing providers for the purchase of unsold stock.
6. Capital to housing associations and Local Authorities to complete the buy-out of further National Housing Trust site exits to retain more mid-market properties within the affordable sector.